

Title (en)  
EBEAM UNIVERSAL CUTTER

Title (de)  
EBEAM-UNIVERSALSCHNEIDER

Title (fr)  
DISPOSITIF DE COUPE UNIVERSEL PAR FAISCEAU D'ÉLECTRONS

Publication  
**EP 3155647 A4 20180124 (EN)**

Application  
**EP 14894455 A 20141219**

Priority  
• US 201462012217 P 20140613  
• US 2014071670 W 20141219

Abstract (en)  
[origin: WO2015191107A1] Lithographic apparatuses suitable for, and methodologies involving, complementary e-beam lithography (CEBL) are described. In an example, a blanker aperture array (BAA) for an e-beam tool includes a first column of openings along a first direction. The BAA also includes a second column of openings along the first direction and staggered from the first column of openings. The first and second columns of openings together form an array having a pitch in the first direction. A scan direction of the BAA is along a second direction, orthogonal to the first direction. The pitch of the array corresponds to half of a minimal pitch layout of a target pattern of lines for orientation parallel with the second direction.

IPC 8 full level  
**H01J 37/04** (2006.01); **H01J 37/302** (2006.01); **H01J 37/317** (2006.01); **H01L 21/027** (2006.01); **H01L 21/311** (2006.01)

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Citation (search report)  
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• [I] US 5430304 A 19950704 - YASUDA HIROSHI [JP], et al  
• [XAI] HIROSHI YASUDA: "Fast Electron Beam Lithography System with 1024 Beams Individually Controlled by Blanking Aperture Array", JPN. J. APPL. PHYS, vol. 32, Part 1, no. 12B, 1 December 1993 (1993-12-01), pages 6012 - 6017, XP055147336, DOI: 10.1143/JJAP.32.6012  
• See references of WO 2015191107A1

Designated contracting state (EPC)  
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**US 2014071670 W 20141219**; CN 201480078821 A 20141219; EP 14894455 A 20141219; JP 2016566247 A 20141219; KR 20167031468 A 20141219; TW 104114424 A 20150506; TW 106122898 A 20150506; US 201415122622 A 20141219; US 201916252427 A 20190118